ON THE HORIZON

Volume 5 Issue 2 National Weather Service Paducah, KY Summer 1999

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WFO PADUCAH "OPEN HOUSE" A GREAT SUCCESS

Kevin Smith, Meteorologist

The National Weather Service Warning and Forecast Office in Paducah, Kentucky celebrated its first-ever Open House in its new building located next to Barkley Regional Airport on May 8, 1999.

The Open House attracted over 200 visitors from southwest Indiana, western Kentucky, southeast Missouri, and southern Illinois. Among the visitors, were staff members from Congressman Ed Whitfield's office, emergency preparedness managers, NWS cooperative observers, and Skywarn storm spotters. The NWS Open House also hosted several regional television stations, with on-camera interviews given by Beverly Poole (Meteorologist-In-Charge) and Ricky Shanklin (Warning Coordination Meteorologist).

Open House participants were given formal presentations on the newest hardware and software, including AWIPS, CRS, NWR, WSR-88D, and RIVERPRO/HYDROVIEW, in the office. In addition, site tours of the agricultural weather station and the WSR-88D building were offered outdoors. Visitors were given an opportunity for a "question and answer" session at the end of the tour.

Planning for the NWS Open House began back in early March 1999. The Open House team at NWS Paducah worked closely with the Barkley Regional Airport Authority, in particular Mr. Richard Roof, Airport Manager, to secure parking and shuttle service for visitors, as well as setting up outdoor concessions for the event. Nearly all of the WFO Paducah staff were available to come help and greet the visitors. Many positive comments and experiences were gained.

In addition, interest in the NWS Paducah Open House continued well after the event. Mr. Ron Rhodes, TV Meteorologist with WTVW (FOX) - Channel 7 in Evansville, Indiana, stopped by on May 11th. He filmed a "virtual tour" of the WFO Paducah office narrated by Ricky Shanklin, WCM. Another visit by emergency managers from Southern Illinois was held May 15th.

Visitors being briefed on the new NOAA Weather Radio System (CRS)

Visitors viewing the Advanced Weather Interactive Processing System

NEW HYDROLOGIC SOFTWARE NOW IN USE

Mary Lamm, Service Hydrologist

NOAA, NWS, NWR, AWIPS, CRS, WSR-88D...How many more acronyms can there be? Well, let us give you one more—W-H-F-S. As part of the AWIPS (Advanced Weather Interactive Processing System) platform, the ***W***eather Forecast Office ***H***ydrologic ***F***orecast ***S***ystem is one of the latest technological tools. This hydrologic software is used by Service Hydrologists in the management of the Weather Forecast Office hydrology programs and provides a tool for **all** operational staff to use in the course of hydrologic operations, such as the issuance of flash flood and main-stem river flood products.

WHFS is composed of three programs: Hydrobase, Riverpro, and Hydroview. **Hydrobase** manages a database of hydrometeorological data collection stations and forecast points located throughout the Hydrologic Service Area (HSA). **Riverpro** automates the generation and issuance of River Statements, Flood Warnings, and Flood Statements for locations within the HSA. Riverpro can extract observed and forecasted river stages and compare these data to threshold stage values that represent flood categories. Based on this, Riverpro can recommend the appropriate product and create the product based on predefined instructions. After all review and edits are complete, Riverpro can issue the product. **Hydroview** is perhaps the key component of WHFS. Operational staff can use Hydroview to monitor hydrologic situations/events and display hydrologic and meteorological data in tables and graphical time series formats. After all, they say "a picture is worth a thousand words." Hydroview can provide a geographic view of the HSA with various types of data.

The Weather Forecast Office in Paducah has undergone some major changes in the past few years, both in personnel size and technology. WHFS is just one of the latest in a long line of tools designed to aid operational staff in the mission of the National Weather Service—which is the protection of life and property.

STORM DATA PUBLICATION NOW 0N-LINE

Mike York, Meteorologist, Webmaster

Many people are unaware that the National Weather Service publishes a monthly Storm Data report. Storm Data is a highly detailed compilation of storm reports from across the nation. Each local office of the National Weather Service, including Paducah, is required to submit a monthly report for its County Warning Area. As a rule, any event that meets the criteria for the issuance of any type of warning must be included in Storm Data. This includes high winds, large hail, tornadoes, flooding and flash flooding, and winter storms. Significant weather events of any kind are included in the Paducah report, such as lightning strikes, prolonged heat waves, cold snaps, and some light to moderate snowfalls. Details for our reports are gathered from newspaper clippings, trained spotters, emergency managers, law enforcement personnel, and any other credible sources. In cases where major damage warrants a survey by our office staff, details of the survey are included in the report. For each event, dollar damage estimates, injuries, and fatalities are listed. In summary, the Paducah Storm Data report is the most comprehensive, detailed listing of significant weather events over southwest Indiana, western Kentucky, southern Illinois, and southeast Missouri.

Monthly Storm Data reports from the Paducah office are available on our web site at **www.crh.noaa.gov/pah/storm.html**. These reports, which are in PDF format, require the Acrobat reader to open the report. If your computer does not contain this software, it may be downloaded for free by using the link on our web page. If you prefer the published national Storm Data report, covering all 50 states, you may obtain pricing and ordering information from the National Climatic Data Center (NCDC) at **www5.ncdc.gov/pubs/publications.html#SD**. For those preferring not to use the internet, call NCDC at (828) 271-4800 for subscription, pricing, and ordering information. The typical national publication averages 200 to 300 pages of small print, so these files may take quite a while to download. The Paducah report is normally 2 to 4 pages, but may run as long as 15 to 20 pages for a busy severe weather month. The monthly reports generated by our office are posted on our web site beginning with the January, 1998 report.

OVERPASSES NOT ADEQUATE TORNADO PROTECTION

Jim Packett, Meteorologist

Ever since the 1991 nationally televised clip of a TV news crew and several others successfully seeking safe shelter under an Andover, Kansas interstate overpass during a tornado, the general public has had the perception that overpasses are a good source of protection from tornadoes. This may be true in some instances. Yet, in the May 3,1999 tornado outbreak in central Oklahoma, many people received injuries and several perished as a result of seeking shelter under an overpass. The tornadoes in Oklahoma City were of a violent nature, sometimes measuring a F5 on the tornado intensity scale. With tornadoes of this intensity, the only true place of safety is in an underground storm shelter. F5 tornadoes tend to level everything in their path.

One of the problems with an under-the-girder-type of shelter is that it can cause a dangerous wind tunnel effect. This may cause the winds to be stronger and more focused underneath. This can also cause the overpass to be a collector of debris. Remember...do not try to outrun a tornado in your car; instead leave it immediately. Seek shelter in a nearby sturdy building or underground shelter. If none is available, lie flat in the nearest low spot, dip, or ditch.

HOT WEATHER SAFETY TIPS

Jim Packett, Meteorologist

Most people don't realize how deadly a heat wave can be. Heat disorders generally have to do with a reduction or collapse of the body's ability to shed heat by circulatory changes and sweating, or a chemical imbalance caused by too much sweating. When heat gain exceeds the level the body can remove, or when the body cannot compensate for fluids and salt lost through perspiration, the temperature of the body's inner core begins to rise and heat related illness may develop. Following are a few Hot Weather Safety Tips that will mitigate the effects of heat and humidity:

* Drink plenty of water and fruit juices
* Avoid alcoholic beverages
* Wear loose-fitting, lightweight, light colored clothing
* Avoid going outside during the hottest part of the day
* If you must go out, use sunscreen
* Use a buddy system between co-workers
* Inside, keep shades drawn and blinds closed
* Keep lights down low or turned off
* Take cool (not cold) showers or baths
* Eat frequent small meals. Avoid high protein foods
* Avoid using salt tablets unless directed by a doctor
* Do not leave children or pets in a closed vehicle
* Spend as much time as possible in an air conditioned environment
* Provide extra water and access to cool environment for pets
* Listen to media sources to keep up with the latest watches, warnings, and advisories.

NUMBER OF 1999 TORNADOES FOR WFO PADUCAH HIGHEST IN FOUR YEARS

Rick Shanklin, Warning Coordination Meteorologist

The 1999 severe weather season for our region has been active. In fact, the number of tornadoes between January through June this year had already totalled 20! This is the highest number since the Paducah County Warning Area (CWA) was expanded to 58 counties in 1996. Fourteen of the 20 tornadoes occurred on January 21st and 22nd, 1999, making it the most active single outbreak of tornadoes in the current Paducah CWA. Although the April 19, 1996 outbreak ranked second in terms of the number of tornadoes (9), there were 3 F3 tornadoes that day while the 2 strongest tornadoes in the January 21-22nd outbreak received an F2 rating. Monetary losses from property damage have been approximately $2.5 million so far this year.

Following is a breakdown of the 20 tornadoes so far this year:

	F0	F1	F2
January	6	6	2
February	0	1	0
March	0	0	0
April	1	1	0
May	0	0	2
June	0	1	0
TOTAL	7	9	4

FIRE WEATHER FORECASTS COMING SOON

Paul Witsaman, Meteorologist, Fire Weather Focal Point

Fire weather forecasts will be an addition to the suite of products and services provided by WFO Paducah. Anticipate the fire weather forecasts from your NWS Paducah office during the Spring 2000 fire season. This summer, the Paducah staff began training on preparing and issuing fire weather forecasts. That training will continue through the fall of 1999. WFO Paducah's Fire Weather forecasting responsibilities will cover the Mark Twain National Forest of southeast Missouri and the Shawnee National Forest of southern Illinois.

Fire weather forecasts differ from traditional forecasts due to the addition of several items. Added parameters include minimum and maximum humidities, mixing heights, transport winds, hours of precipitation, quantity of precipitation, and atmospheric stability. All these factors help emergency management and forestry officials suppress wildland fires and to plan prescribed burns.

The fire weather forecast will also contain a general synopsis of expected weather. One highlight of this synopsis will be the "big change" statement. The next big change in the weather will be briefly described and timed in the fire weather synopsis. An example of this product is shown below. In this example, only the first period of the forecast will be displayed. Normally, expect three periods (i.e. TODAY, TONIGHT and TOMORROW) in the fire weather forecast.

EXAMPLE:

.Synopsis...Expect some cloudiness with a slight chance of afternoon showers today from a weak upper level disturbance. The precipitation threat will end by tonight as high pressure builds into the region. This fair weather maker will keep the area dry through Saturday.

.TODAY...MORE SUN THAN CLOUDS
HIGH TEMPERATURE... 80 TO 85 DEGREES
MINIMUM HUMIDITY... 41 TO 47 PERCENT
20 FOOT WIND... NORTHEAST 6 TO 12 MPH

PRECIPITATION... WIDELY SCATTERED TRACE AMOUNTS
PRECIPITATION DURATION... LESS THAN 1 HOUR

MIXING HEIGHT... 2200 MAGL
SFC TEMP WHEN 1700' MIXING HEIGHT REACHED... 74 DEGREES
TRANSPORT WIND... NORTHEAST 4.6 M/S
STABILITY RATING... STABLE

Paul Witsaman, NWS Paducah Fire Weather Focal Point, worked as an Incident Meteorologist (IMET) in August, 1998 at a large forest fire in Idaho. Paul explained, "the privilege of providing weather support to the brave firefighters helped me gain valuable experience that will enhance our area's fire weather program."